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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,913	06/24/2003	Kenichi Hashizume	852.0029.U1(US)	4355
29683	7590	08/10/2007		
HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER CHANG, RICK KILTAE	
			ART UNIT	PAPER NUMBER
			3726	
			MAIL DATE	DELIVERY MODE
			08/10/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/603,913	<b>Applicant(s)</b> HASHIZUME ET AL.	
	<b>Examiner</b> /Rick K. Chang/	<b>Art Unit</b> 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 33-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8 and 33-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Sullivan et al (US 7,181,172).

Sullivan discloses forming a cellular phone 800 using two shot molding wherein molds the base and contact plating directly into the back panel (col. 3, lines 54-55; col. 4, lines 1-40; and Fig. 7). Col. 3, lines 36-55 discloses metallic materials such as circuitry such as the electrical supply for the call vibrator, antenna transmission lines, detection circuitry; it is inherent that most commonly used plating method is either electroless or electroplating; it is inherent that during the assembly of a mobile phone electronic components are connected to the call vibrator, antenna transmission lines, detection circuitry. The integral connector structures, between 504cs in Fig. 5 or 1004s in Fig. 10 or 908s in Fig. 10, are configured (for example, there is a space between 1004s in Fig. 10) to receive at least a portion of a connecting member of the electronic component therein.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al (US 7,181,172) in view of Politycki et al (US 3,767,538).

Sullivan fails to disclose treating the plastic material with a seeding or conductive metal.

Politycki discloses treating the plastic material with a seeding or conductive metal

(Abstrate).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sullivan by treating the plastic material with a seeding or conductive metal, as taught by Politycki, for the purpose of enhancing adhesion between a resin layer and a metal layer.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al (US 7,181,172)/Politycki et al (US 3,767,538) as applied to claims 12-13 and 15 above, and further in view of Murakami et al (US 4,239,813).

Sullivan/Politycki fail to disclose that the carrier material comprises an ink and printing the carrier material on the substrate.

Murakami discloses the carrier material comprises an ink and printing the carrier material on the substrate (col. 1, lines 33-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sullivan/Politycki by the carrier material comprises an ink and printing the carrier material on the substrate, as taught by Murakami, for the purpose of enhancing adhesion between a resin layer and a metal layer.

6. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al (US 7,181,172)/Politycki et al (US 3,767,538) as applied to claim 12 above, and further in view of Nishihara et al (US 5,118,458).

Sullivan/Politycki fail to disclose press moulding the substrate, moulding the connector onto the cover member after the substrate has been moulded to form the cover member, providing a flexible holding member in the connector structure to hold the electronic component in electrical communication with the electrical circuitry and a resilient member for the flexible holding member.

Nishihara discloses press moulding (Fig. 5 shows 2 pressing onto 1 with substrate therebetween), moulding the connector (Fig. 7 element 16) onto the cover member (Fig. 7 shows a second layer) after the substrate has been moulded to form the cover member, providing a flexible holding member in the connector structure to hold the electronic component in electrical communication with the electrical circuitry and a resilient member for the flexible holding member (Fig. 13 shows interconnecting the layers as a second molding, Fig. 15 shows mounting components, all the layers are flexible and resilient member, the layers can be any number depending on the design criteria).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sullivan/Politycki by press moulding the substrate, moulding the connector onto the cover member after the substrate has been moulded to form the cover member, providing a flexible holding member in the connector structure to hold the electronic component in electrical communication with the electrical circuitry and a resilient member for the flexible

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holding member, as taught by Nishihara, for the purpose of molding a multi-layer flexible circuit for mobile phones.

### ***Response to Arguments***

7. Applicant's arguments filed 5/16/07 have been fully considered but they are not persuasive.

The integral connector structures, between 504cs in Fig. 5 or 1004s in Fig. 10 or 908s in Fig. 10, are configured (for example, there is a space between 1004s in Fig. 10) to receive at least a portion of a connecting member of the electronic component therein.

### ***Interviews After Final***

8. Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

### ***Conclusion***

9. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional). Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that

the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (571) 272-4564. The examiner can normally be reached on 5:30 AM to 1:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rick K. Chang/  
Primary Examiner, A.U. 3726

RC  
July 31, 2007